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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,199	08/08/2006	Kalle Kallio	04150.0028U1	9440
23859 7590 06/11/2009 Ballard Spahr Andrews & Ingersoll, LLP SUITE 1000 999 PEACHTREE STREET ATLANTA, GA 30309-3915				
EXAMINER				
TESKIN, FRED M				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
06/11/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/585,199

**Applicant(s)**

KALLIO ET AL.

**Examiner**

Fred M. Teskin

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**Detailed Action**

This Office action is responsive to the reply of 05 February 2009. The objection and Section 112 rejection set forth in the previous Office action have been obviated by appropriate amendments to the Specification and claims. Claims 1-15 remain pending and under examination herein.

The previously indicated allowability of claims 14 and 15 is withdrawn in view of the newly discovered prior art to Erhman et al and Huovinen et al. Rejections based on the new references follow.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ehrman et al (US 2004/0044153).

Claimed invention is a method of preventing metallocene catalyst deactivation in ethylene polymerization comprising using at least two feed streams, wherein a first stream comprises a metallocene catalyst and is free of hydrogen and a second stream comprises hydrogen and is free of metallocene catalyst to thereby prevent metallocene catalyst deactivation in ethylene polymerization.

Ehrman et al have disclosed a method of polymerizing ethylene in a gas phase, fluidized bed reactor, the method comprising the use of multiple feed streams, including gaseous feed streams of ethylene and hydrogen introduced below the reactor bed into a recycle gas line, along with direct injection of a supported metallocene catalyst into the fluidized bed using purified nitrogen (see paragraphs [0325]-[0326], [0334] and Examples 1-2). In the disclosed examples, the catalyst and hydrogen were introduced to the reactor via separate feeds; therefore, the respective feeds are considered to meet the claim limitations as to being free of hydrogen and of metallocene catalyst. Thus, Ehrman et al teach the same manipulative steps as claimed, albeit without recognizing prevention of metallocene deactivation. This result, however, is reasonably presumed to inevitably flow from practice of the procedurally identical method disclosed. In view of the identity in method steps, there is a plausible basis for finding that the reference method falls within the scope of claim 14. In other words, the subject matter of claim 14 is inherently described by Ehrman et al. It follows that there is sufficient evidence in the record to justify shifting the burden to applicants to demonstrate that the method

disclosed by Ehrman et al does not inherently anticipate the subject matter of claim 14.  
*Cf. In re Spada*, 15 USPQ2d 1655 (Fed. Cir. 1990)

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Huovinen et al (WO 99/16797).

Claimed invention is a slurry polymerization reactor having a polymer slurry outlet, catalyst feed inlet and hydrogen feed inlet, said slurry outlet having a conduit connecting to said hydrogen feed inlet adapted to allow recycling of diluent from said polymer slurry to said hydrogen feed.

Huovinen et al have disclosed a loop slurry reactor 40 having a catalyst transfer line 36, a hydrogen addition line 44 and a product transfer line 48 - see page 13, lines 30+; page 18, lines 1-11 and Fig. 1. Said lines 36, 44 and 48 are seen to correspond respectively to "catalyst feed inlet", "hydrogen feed inlet" and "polymer slurry outlet" of the claimed reactor. The product transfer line leads to a flash separator 50 provided with a line 46 for recycling hydrocarbon medium (serving as polymerization diluent), remaining monomer and hydrogen separated from the produced polymer particles to the loop reactor. As shown in Fig. 1, line 46 connects with line 44 and thereby allows recycling of slurry from the product transfer line to the hydrogen addition (feed) line. Taken in the broadest context, the claim language "said slurry outlet having a conduit connecting to said hydrogen feed inlet" does not preclude indirect attachment of the connecting conduit to the slurry outlet via a flash separator as shown and described by Huovinen et al. As such, claim 15 fails to define novel structure over Huovinen et al.

Claims 1-13 are maintained as allowable over the prior art of record.

In view of the new grounds of rejection, this action is made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred M Teskin/

Primary Examiner, Art Unit 1796

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